

Claims:

Claim 1. A rotational pulsation system comprising:

a rotor having permanent magnets thereat;

a turbine having blades configured to drive the rotor;

a centralizer having coils and a stator package positioned to operably communicate with the permanent magnets;

a rotational screen disk disposed at the rotor;

a static screen disk disposed at the rotational screen disk.

Claim 2. A rotational pulsation system as claimed in claim 1 wherein the device further includes a guide having blades.

Claim 3. A rotational pulsation system as claimed in claim 2 wherein the guide blades direct a fluid flow therewith against the turbine blades.

Claim 4. A rotational pulsation system as claimed in claim 1 wherein the coils are electrically attached to a load controller.

Claim 5. A rotational pulsation system as claimed in claim 1 wherein an electrical load placed upon the coils causes the rotor when spinning to slow.

Claim 6. A rotational pulsation system as claimed in claim 1 wherein the system, in use, creates a pulse in a fluid flowing therethrough at a frequency.

Claim 7. A rotational pulsation system as claimed in claim 6 wherein the frequency is adjustable by varying an electrical load placed upon the coils.

Claim 8. A rotational pulsation system as claimed in claim 1 wherein a communication arrangement includes one or more of the systems of claim 1.

Claim 9. A rotational pulsation system as claimed in claim 8 wherein each system creates a distinct frequency pulse.

Claim 10. A rotational pulsation system as claimed in claim 8 wherein each system creates the same frequency pulse.

Claim 11. A rotational pulsation system as claimed in claim 8 wherein each system frequency is phase shifted from at least one other system frequency.

Claim 12. A method for communicating in a wellbore comprising:
spinning a rotational pulsation system to create a first frequency;
applying an electrical load to the system to modify the first frequency to a second frequency;
removing the electrical load to resume the first frequency; and
selecting between the applying and removing conditions according to a message to be communicated.

Claim 13. A method for communicating in a wellbore as claimed in claim 12 wherein said spinning is caused by flowing a fluid past the system.

Claim 14. A method for communicating in a wellbore as claimed in claim 12 wherein said applying includes a constant load and a selectively applied load.

Claim 15. A method for communicating in a wellbore as claimed in claim 12 wherein said spinning includes spinning multiple systems each of which creates a first frequency and a second frequency.

Claim 16. A method for communicating in a wellbore as claimed in claim 15 wherein each system creates the same first frequency and second frequency resulting in constructive interference.

Claim 17. A method for communicating in a wellbore as claimed in claim 16 wherein said constructive interference is further manipulated using phase shifts.

Claim 18. A method for communicating in a wellbore as claimed in claim 15 wherein each system is configured to create a different first frequency and second frequency.

Claim 19. A method for communicating in a wellbore as claimed in claim 18 wherein the different frequencies are created by different electrical loads on each system.

Claim 20. A method for communicating in a wellbore as claimed in claim 15 wherein a difference between each system first frequency and second frequency is employed to create another communication frequency signal having a first frequency and a second frequency utilizing one frequency from each of two systems.

Claim 21 A method for communicating in a well bore as claimed in claim 20 with the spinning is spinning more than two systems and the communicating is by employing combinations of frequencies of at least two of the more than two systems to communicate.

Claim 22 A method for communicating in a well bore as claimed in claim 12 wherein said spinning includes spinning multiple systems, each system creating multiple frequencies.